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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,880	05/25/2001	Andrew Reeve	3036/49962	2253
7590	11/22/2004		EXAMINER	
CROWELL & MORING LLP P.O. Box 14300 Washington, DC 20044-4300			NGUYEN, VAN KIM T	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/864,880	REEVE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Van Kim T. Nguyen	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 21 May 2004.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-5 is/are pending in the application.

4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-3 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>09/14/2001</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: *Improvements in Packet Switches*.

- Improper Arrangement of the Specification.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.

- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Sriram (US 5,463,620).

Regarding claim 1, as shown in Figures 1-10, Sriram discloses a traffic management system (10) for a packet switch, comprising: a cross-bar (25); a plurality of ingress means (21, 22, 23, 24) connected to an input side of the cross-bar; a plurality of egress means (26, 27, 28, 29, 30, 31) connected to an output side of the cross-bar; a bandwidth controller (54) for allocating a bandwidth to each ingress-egress pairing; and a cross-bar controller (48, 50) for controlling operation of the cross-bar in accordance with the bandwidth allocated by the bandwidth controller (col. 3: lines 34-42; col. 8: line 61- col. 9: line 24).

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Regarding claim 2, Sriram also discloses the crossbar controller also selects the next ingress-egress pairing for each ingress means ( $i^{\text{th}}$  queue; col. 9: lines 25-65).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sriram (US 5,463,620).

Sriram discloses a method of controlling a packet switch connected between a plurality of ingress means (21, 22, 23, 24) and a plurality of egress means (26, 27, 28, 29, 30, 31, 32, 34, 36, 38, 40, 42, 44, 46), each ingress means having a packet queue for transmission (21, 23), comprising the step of

- a) defining a period over which the packet queues are to be transmitted ( $D_c$ ; col. 5: lines 35-39);
- b) calculating a rate matrix having elements corresponding to the rates from an ingress means to an egress means (as shown in Figure 5, the sum of traffic rates entering the time slice server equal the 150Mb/s output; col. 5: line 51- col. 6: line 19; and col. 9: lines 13-19);
- c) at the beginning of each period, calculating a cell matrix containing a number of cells which must be transmitted from each of the packet queues during the period (col. 6: lines 20-34);

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d) for each cell slot in the period, determining a configuration which matches the cell matrix by only servicing packet queues with non-zero cell counts (col. 6: lines 34-37), the configuration being determined in accordance with the following constraints: (i) selecting m<sub>i</sub> cells from each ingress means; (ii) routing the cells to each egress means (col. 9: lines 29-33);

e) decrementing the cell counts of each queue serviced (it is inherent the cell counts of each queue is decremented by the number of routed cells after each service); and

f) repeating steps c), d) and e) until the end of the period (col. 9: lines 33-37).

Though Sriram does not explicitly recite selecting no more than one cell from each ingress means, routing no more than one cell to each egress means, and decrementing the cell counts of each queue serviced only by one, but since Sriram teaches the rate of withdrawing cells from each queue is directly corresponding to the available output bandwidth, it would have been obvious to one of ordinary skill in the art at the time the invention was made if the output bandwidth is limited enough, there would be cases whence only one cell at each queue can be serviced at a time.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Chang et al (US 6,804,731); Alasti et al (US 6,757,246); Hughes et al (US 6,747,971); Achilles et al (US 6,707,824); Brandis et al (US 6,654,343); Suzuki (US 6,625,160); Magnusen (US 6,529,476); Khacherian et al (US 6,542,507); Wallner et al (US 6,442,172); Hahn et al (US 6,314,487); Calvignac et al (US 6,195,335); and Caldara et al (US 5,982,771)

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Van Kim T. Nguyen whose telephone number is 571-272-3073. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

vkn



KENNETH VANDERPUYE  
PRIMARY EXAMINER